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ABSTRACT

This is a research project that was intended to study the effects of a factual drug education program on the attitudes on high school and junior high students toward the use of psychoactive drugs. The approximately 250 eighth and twelfth grade students involved in the study filled out a number of questionnaires designed to measure a variety of their attitudes about psychoactive drugs immediately before and after participating in a drug education program that relied heavily on the presentation of known facts about a variety of drugs. Analysis of the data indicated that the students learned about the given drugs to a highly significant degree, their curiosity about the effects of "mind-expanding" drugs was increased, and they exhibited an increased tendency to deal with psychological discomfort through the use of drugs. At the same time they reacted more favorably toward the legalization of marijuana and a reduction of penalties for drug use, and less favorably toward present emphasis on a legal approach to the use of drugs. The primary conclusion of the study is that drug education is not an effective means of suppressing the use of drugs. References and numerous tables are included. (Author)

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DRUG EDUCATION EFFECTS

March 15, 1972

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INTRODUCTION

Drug education appears to have become one of the more nebulous and emotional issues confronting school systems and mental health workers at the present time. Because it reflects the controversy and emotionality surrounding the general issue of drug use, particularly illicit drug use, drug education lacks any kind of solid foundation in philosophy and fact that might protect it from the buffeting of national trends, biases, and ignorance. Most authorities seem to be in favor of drug education, but there is little agreement as to what constitutes an effective program or even what its goals should be.

Until quite recently the most common approach used was one utilizing scare tactics and propaganda about the evils of drugs. These approaches were commonly based on the philosophy that almost any means, including fabrication and sensationalism, was justified by the ends of stopping psychoactive drug use (Goddard, 1966). However, many aspects of such an approach are disconcerting. In the first place, indications from the study of attitude change (McGuire, 1966) are that shock techniques are apparently ineffective in altering behavior. Further, young people in this society are increasingly being exposed to a variety of opinions and facts about drugs, and social pressures toward experimentation. Out of this variety of stimulation each must somehow select those opinions, "facts," and sources that appear most credible and reliable in arriving at personal decisions regarding his or her own use of drugs. Information obtained from sources as biased as some of those previously mentioned simply does not coincide with experiences of the teenagers themselves. Thus, these sourced are so often rejected for their lack of credibility, leaving direct experience and peer pressure as the primary factors in the development of attitudes about these drugs. This "credibility gap" is most obvious in regard to the topic of marijuana. Authorities and educators consistently issue statements about the detrimental effects of this drug, statements which go far beyond the available evidence and alienate its users because of the discrepancy between the statements and their own personal experience. One of the first outspoken critics of such approaches was Helen Knowlis of the National Institute of Mental Health, who repeatedly stressed that any drug education program that aimed at total abstinence of psychoactive drug use was doomed from the start. She believed, instead, that such educational processes should attempt to provide a base of knowledge about drugs from which rational decisions could be made concerning personal drug use (Knowlis, 1967).

As more authorities in the area have come to agree with this position there has been a major thrust in the direction of open and honest communication of all known facts about drugs to various segments of the population, particularly students. The basic philosophy of this approach seems to be that comprehensive knowledge of the physical, psychological and legal dangers involved with the use of the illicit drugs will reduce the probability of their use. However, in the case of some drugs, such as marijuana, it is difficult to substantiate with facts, arguments against moderate use that are based on possible physical or psychological damage. In such a case, Halleck (1971) says that "Drug education may not discourage youth from experimenting with illegal

drugs. Under certain circumstances...education may even encourage drug use," p. 2.

More recently the emphasis in drug education in some quarters has been on more broadly conceived and executed programs that focus less on the drugs themselves and more on the decision-making process regarding drug use and general principles underlying such processes (D'Elia and Bedworth, 1971). This approach views drug use as an expression of self that can only be understood and dealt with in the total context of an individual's social and cultural milieu. However, even within this broader framework, meaningful discussion among students and educators presupposes a certain amount of knowledge about drugs.

However, in programs reflecting any of these three philosophies most planning has been done on the basis of opinion and bias, due to a general lack in the development of effective procedures for the assessment of the effects of drug education programs. Having no facts from which to proceed, educators must do so rather blindly. Because of the shortage of available evidence in the area, this study set out to provide some objective verification of the impact of a drug education program that provided a factual account of the nature and effects of psychoactive drugs. The method of dissemination of the knowledge were through lecture and discussion groups, involving a pre- and post-test sequence designed to measure a variety of attitudes about drugs and willingness to try a number of psychoactive drugs.

METHODOLOGY

Subjects

The subjects were 112 high school seniors and 135 eighth graders who were divided relatively evenly between control, discussion and lecture groups.

Materials

1. Drug Attitude Scale (Brehm and Beck, 1968). Scale of 31 items, shown by factor analysis to have 5 pure factors; insecurity, fear of loss of control, sick role, denial of effects, curiosity.

   Subjects rate each item on a scale of 1 to 6 (strongly disagree to strongly agree).

2. Willingness to Try Scale (Blum and Ferguson, in Blum and Associates, 1970).

   Subjects rate willingness to try 18 drugs on a scale of 1 to 6 from definitely unwilling to definitely willing.

3. Drug Knowledge Scale - 60 item scale, copyright 1969 by the San Mateo Union H. S. District.

4. Drug Law Attitude Scale - 5 items rated on a scale of 1 to 6.

5. Drug Use Attitude Scale - 8 questions pertaining to illicit drugs.

Drug Education Input

The drug educator (John Creech, M.S.W.) prepared lectures focusing on the topics of marijuana, alcohol, the opiates, and the mood elevators and depressants. Each presentation dealt with the pharmacological properties and mechanism of action of the drug, history of its use, known physiological and psychological effects, and laws pertaining to its usage. Each lasted 40 minutes and was carefully programmed so as to cover material included in the Drug Knowledge Scale.

The same material was focused on in the discussion groups in a more informal way through the educator's involvement in the groups and by his channeling the discussions.

Procedure

All subjects filled out each of the scales and the demographic data sheet on the day preceeding the drug information sequence. The control subjects then had no further involvement until the day after the termination of the education sequence, when all subjects again filled out the knowledge, willingness, general attitude, and law scales. After the initial testing, the treatment groups participated in four days of the drug education sequence, either receiving lectures or engaging in discussions, and were then retested at the end of this sequence.

Statistics

Considering the levels of treatment as Factor I and grade level as Factor II, a 3x2 two-way analysis of variance with repeated measures design was employed for each measurement factor. This yielded treatment effects upon measurements, effects of grade level on measurements, and interaction between treatment type and grade level. Graphic representation of the analysis is below.

	8th Grade		12th Grade	
	Pre	Post	Pre	Post
I. Control				
II. Group Discussion				
III. Lecture				

In all, change scores on 47 items were obtained through the analyses. Relationships between willingness to try each of the specific drugs and scores on each of the drug attitude scale factors were analyzed by obtaining Pearson Product-Moment correlations, in order to basically replicate the Brehm and Beck study, using these different subjects. Relationships between the demographic data and the dependent variables involved chi square and analysis of variance procedures. This dealt with such matters as the relationship of race and religion to attitudes about drug laws and willingness to try specific drugs.

Demographic Data

Age, sex, race, family income, number of school activities, religion, degree of religious involvement, GPA, and educational level.

RESULTS

The pre-testing eventually provided a survey about the general characteristics of the students who took part in this study and their attitudes toward the use of drugs. This general picture was then broken down into its component factors and analysis was made of the relationships among the specific variables.

Looking first at the 12th graders, of the 112 respondents, 58% were females, while the predominant age was 17. They came from families whose income ranged relatively evenly through all categories from under $5,000/year to over $20,000. The majority was white (73%), while the 23% black respondents were representative of the proportion of blacks in Gainesville. By far the majority of the students (80%) were religious, involved predominantly in Protestant church activities on an occasional or regular basis. Most were involved in at least one school activity and maintained a grade point average in the C-B range.*

The knowledge these students had about drugs had been derived from their own use of the drugs, from formal course work, and from friends and older drug users, who were seen as the most trusted source of information. Half of these students thought that the use of drugs should be strictly a matter of free choice, while nearly as many thought drugs should be used for medical purposes only. Many of their attitudes were found to be quite specific to the drug in question.

For instance, on the matter of marijuana usage, they were found to be evenly divided between those who were willing to try it, and those who were not, with very few (8%) being neutral on the subject.* There was also an even split between those who thought the moderate use of marijuana to be dangerous and those who thought it not to be so, although on this item a greater number (24%) did not know. A slight majority (52%) felt that marijuana should be used freely by all, as compared to the 37% who felt it should be used by no one. An even larger majority (71%) thought its use to be increasing. A majority (50%) saw the use of marijuana as motivated primarily by curiosity, while 34% believed it to be the result of group influence. An overwhelming majority (78%) thought this drug to have pleasant effects, and when asked about the primary source of restriction of their use of it and LSD, 42% marked legal penalties, while the remainder were evenly distributed between family environment and consequences on physical and mental health. The majority of students (61%) thought that regular users of marijuana and LSD are more susceptible to becoming users of hard narcotics. Responses to the question whether marijuana should be legalized revealed that opinions were evenly split pro and con.

There was a uniform unwillingness (about 90% in all cases) to try the hallucinogenic drugs (LSD, psilocybin, and peyote). The intensity of this unwillingness and their unpopularity, particularly of LSD,

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*See Table 1, Appendix.

*Fewer (30%) were willing to any degree to try hashish.

became obvious in the course of the discussion groups. There was almost unanimous belief (85%) that moderate use of LSD is dangerous. A majority (65%) felt that no one should use LSD, although 35% felt that its use should be allowed under medical supervision freely by all. There was an interesting pattern of beliefs regarding LSD that indicated that although most individuals were not willing to try it themselves, and thought its use to be dangerous, a sizable percentage of these students evidently saw some merit in the use of LSD and advocated its availability, particularly under medical supervision. A good deal of disagreement existed in beliefs about trends in LSD usage, with 33% indicating belief that its use would increase and 29% foreseeing a decrease. Escape (33%) and group influence (28%) were seen as the major determinants of LSD usage.*

Over 94% were unwilling to try heroin, while less than 2% were willing to do so. Most of the respondents thought that the use of heroin is the result of a desire to escape (48%) or group influence (33%). Its effects were believed to be unpleasant by 40% of the respondents.

Looking at the stimulants, over 80% of these students were unwilling to try them, and the same percentage believed they should be used only under medical supervision. At the same time, 48% believed the use of stimulants to be increasing.

The depressants, seconal and phenobarbital, were also found to be quite unpopular, with about 84% of the respondents indicating unwillingness to try them. The pain-killers demoral and codeine were only slightly more acceptable to this group, and 80% were unwilling to try the tranquilizer miltown. The students were split fairly evenly as to their opinion whether moderate use of sleeping pills and tranquilizers is dangerous or not, while the belief that tranquilizers should be used only under medical supervision was shared by almost all respondents.

Alcohol was found to be the most acceptable of the given drugs to these students, with 53% indicating some willingness to try it. At the same time 37% think alcohol is the most commonly abused drug. The distribution of responses to the willingness to try alcohol and marijuana items were found to be quite similar and were highly correlated (.66), indicating possible similarity of factors determining use or non-use of these two drugs. The distribution of willingness to try tobacco responses were also very similar to the marijuana and alcohol items, and correlated .71 with marijuana willingness and .67 with alcohol willingness, making it the third member of the triad of most acceptable drugs.

As was expected, the 8th graders in the study were found to be far less drug oriented that the older students. In this group there were 135 respondents, with an average age of 13. Two differences in the demographic

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*Its effects were believed to be deceiving by 33% and unpleasant by 28%.

variables were that students in the 8th grade group showed a greater tendency to have come from a family with an income in the middle range ($5,000-$15,000) and to be regular religious participants.

A higher percentage (61%) than the older students believed that drugs should be used only for medical purposes. In general, these students were less willing to try the named drugs, as was particularly the case with marijuana, which 77% were unwilling to try (as compared to 44% of the older students). Only 7% were definitely willing to try it, while only 3% were definitely willing to try hashish. The two groups were quite similar in their unwillingness to try the stronger psychedelics. The 8th graders were slightly less willing to try the remaining drugs until the alcohol item. In the younger group 61% were unwilling to try alcohol, as opposed to 34% of the older students. As predicted, the younger students knew far less about drugs, averaging 16.6 on the Drug Knowledge Scale as compared to the 12th grade 25.6 average (t-test sign. 001). The majority of students in this group view even the moderate use of sleeping pills, tranquilizers, marijuana, and LSD as dangerous. The majority believed that stimulants and tranquilizers should be used only under medical supervision, and that marijuana and LSD should be used by no one (52% and 60% stating such on the latter items). In general, far fewer 8th graders thought that the use of tranquilizers, stimulants, and marijuana was increasing, with only 40% believing so of the latter drug. A major difference between the groups was on the item asking for idenfitication of the primary source of restriction of their use of drugs. A much higher proportion of the younger students (33%) reported that their family environment was the primary presentative factor, reflecting greater involvement with, and allegiance to, the family commonly found within this age group. Responses on the law attitude items and marijuana legalization item were quite similar for both groups.

Proceeding from this simple descriptive overview of the drug orientation of both groups, the next step was to study relationships between these factors in order to identify the variables associated with particular patterns of attitudes regarding drug use. Beginning with the 12th graders again and looking at responses to the Willingness to Try Scale, a number of relationships between the specific drugs became clear. As was the case on the scoring sheet of this scale, groupings of drugs, as defined by their purposes for use, could be ascertained. Thus, willingness to try marijuana was highly correlated with willingness to try hashish (.86), the psychedelics were highly correlated (psilocybin v. .72 with LSD and .81 with peyote), seconal correlated .90 with phenobarbital (sedative-hypnotics), demoral correlated .69 with codeine and .47 with heroin (pain-killers), and benzedrine correlated .95 with dexedrine and .92 with methedrine. Looking at relationships between these groups some interesting patterns emerged. Marijuana and hashish formed a somewhat isolated group, indicating that the factors responsible for their use may be unique. However, as mentioned earlier, a grouping can be made of marijuana, alcohol, and tobacco, which clearly emerged as the drugs of choice of these students. It can also be noted that willingness to try marijuana was not significantly correlated with willingness to try heroin. However, moderate correlations existed between willingness to try marijuana and the psychedelics

(.39 with LSD) and the stimulants (.41 with Benzedrine) both of which groups of drugs are associated with the youth drug culture. Likewise, willingness to try the psychedelics was highly correlated with willingness to try the stimulants (LSD v. .64 with dexedrine). As can be seen, willingness to try the psychedelics correlates substantially with all drugs but alcohol. A large grouping can be made of all the stimulants, sedatives, and pain-killers, drugs most commonly associated with the adult drug culture in this society. As will shortly be seen, willingness to try these drugs was seemingly not effected by factors such as religious involvement that have a negative relationship with willingness to try the illicit drugs. Seconal, for instance, correlated .68 with benzedrine, .64 with the tranquilizer miltown, and .66 with demoral. Likewise, codeine correlated .61 with miltown and .63 with benzedrine.

These patterns also applied to the 8th graders, but are greatly obscured with this younger group. It appears that they were far less discriminating about the given drugs, such that correlations generally were much higher across all drugs.* Thus, marijuana correlated .56 with LSD, .58 with phenobarbital, and .52 with benzedrine. LSD correlated .76 with phenobarbital, .64 with heroin, and .73 with dexedrine. It appeared that members of this group who were willing to try any of the given drugs were also willing to try almost any of the other drugs. This could be a function of their lack of knowledge of drugs as seen by their scores on the drug knowledge scale, in which case drug education aimed just at providing the basis for discrimination between drugs would seem to be appropriate for this age group. Similarly, among these students there was an obvious lack of correlation between knowledge of drugs and willingness to try them. This was also true of the 12th graders, but to a lesser extent. This seems to indicate that decisions to use of not use particular drugs may be related to knowledge of them in any way but may be primarily motivated by social and other influences.

Several of the items on the Drug Attitude Scale were found to be significantly correlated with willingness to try a number of the given drugs. Insecurity, which in this scale denotes discomfort of dissatisfaction with self and a willingness to alleviate this discomfort through the use of drugs, was found to correlate -.31 with willingness to try marijuana and -.30 with willingness to try hashish (lower scores on this item indicate greater insecurity). The correlations were slightly higher among 8th graders (-.36 marijuana and -.35 hashish). Approximately the same relationship existed between this item and willingness to try the hallucinogens, heroin, the stimulants, and tobacco. Curiosity about the effects of a "mind-expanding" drug was found to correlate -.27 with willingness to try marijuana and -.29 with hashish among the 12th graders and slightly lower with the younger group (again, lower scores indicate greater curiosity). Among the older students, fear of loss of control (higher scores indicate less fear) was found to be significantly related to willingness to try the psychedelic drugs (v. 30 with peyote, .24 with

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*See Table 2, Appendix

LSD) and the stimulants (.27 with benzedrine) indicating that this is a factor in reducing willingness to try these psychoactive drugs.

Scores on the Law Attitude Scale (lower scores indicate a more liberal attitude toward drug laws) were found to correlate -.44 with willingness to try marijuana and -41. with hashish among the 12th graders, and slightly lower with the hallucinogens (-.33 with psilocybin). The correlations were somewhat lower among the younger group. Scores on the marijuana legalization question were found to correlate -.36 with willingness to try marijuana and -.30 with hashish (lower scores indicate agreement with the statement that marijuana should be legalized). This low correlation seems to indicate agreement with many other findings in this study that indicate these students in many cases are tolerant of the drug taking practices of their peers, regardless of their own personal decision to use or refrain from use of drugs.

A number of demographic variables were found to significantly differentiate among the students as to their responses on many of the items. Among the 12th graders the primary of these were sex and degree of religious involvement, and to a lesser extent, race, family income, and grade point average.*

The girls in this group indicated that they were far less willing than the boys to try marijuana and hashish or the hallucinogens psilocybin and peyote (analysis of variance [AoV] significant at the .01 level). One significant exception within this "mind-expanding" group of drugs was LSD, for which there was sexual uniformity in willingness to try it. On the question relating to moderate use of marijuana, far more females (48%) than males (22%) expressed the belief that such use is dangerous (X^2 significant .01). Conversely, more of the males (52%) than females (28%) believed that it is not dangerous. Significantly more males (73%) than females (37%) thought marijuana should be used freely by all(X^2, .005). Far more males (87%) than females (60%) saw marijuana use on the increase, whereas more girls thought future usage would remain about the same (X^2, .025). Boys also tended to see marijuana usage as being more widespread (X^2, .005). A much higher percentage of boys (21%) than girls (3%) thought LSD should be used freely by all, whereas more of the girls believed it should be used by no one (X^2, .025).

Girls in this group were also less willing than the boys to try alcohol (AoV, .01), and to a lesser extent phenobarbital and dexedrine (AoV, .05). There were no other significant sex differences on willingness to try the pain-killers, sedatives, and stimulants, all of which are more socially acceptable to the society at large and whose effects are typically more easily controlled. Females were also found to know significantly less about drugs (AoV, .01). On the question pertaining to reasons for drug use, more boys (29%) than girls felt that the primary motivation was to feel good (X^2, .025). A number of sex differences came out on the Drug Attitude Scale. Girls scored higher on the insecurity factor than the boys (AoV, .01), indicating a general unwillingness to deal with psychological discomfort through the use of drugs. At the same

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*See Table 3, Appendix
*See Table 4, Appendix

time, females indicated a much greater fear of loss of control (AoV, .01), both of which to some extent account for their unwillingness to try many of the given drugs. The females also showed a greater tendency to deny the effects that drugs may have on them (AoV, .05). and, finally, girls scored higher on the Law Attitude Scale (AoV, .05), which indicates their greater tendency to believe that presently existing drug laws should be maintained and that the issue of drug abuse should be approached primarily from a legal angle.

Among the 8th graders sex was not found to be nearly the differentiating characteristic in regard to drug attitudes that it was with the older group. Girls in this group were found to be less willing to try psilocybin, peyote, and benzedrine (AoV, .05). Males were more inclined to see a future decrease in use of LSD (X^2, .025). On the Drug Attitude Scale girls indicated a greater tendency to seek medical attention for minor ailments (sick role, AoV, .01) and to deny the effects of drugs (AoV, .05).

Degree of religious involvement was found to be a very significant differentiating variable on many of the same items that showed sex differences. Those who were involved with religious activities on a regular basis were less inclined to try marijuana (AoV, .05), hashish (.5), psilocybin (.05), peyote (.05), alcohol (.01) and tobacco (.05). They knew less about drugs (AoV, .05), and on the Drug Attitude Scale indicated a greater tendency to assume a sick role, and tended to deny the effects of drugs to a greater extent than their non-religious counterparts. More non-religious students (73%) believed that moderate use of marijuana is not dangerous than the regular participants in religious activities (26%, AoV, .025). Far more of the non-religious students believed that tranquilizers (AoV, .01) and stimulants (AoV, .001) should be available to everyone, while the religious students believed both should be used only under medical supervision. As for the use of marijuana, non-religious students (87%) thought it should be freely available to all, as compared to 38% of the religious students. Of this latter group, 49% thought marijuana should be used by no one, versus 13% of their counterparts who were in agreement.

Among the 8th graders degree of religious involvement was not found to be as significant a variable as it was among the older students. Those who attended church on a regular basis were found to be less willing to try marijuana (AoV, .05) and knew less about drugs (AoV, .05). As with the older students, the non-religious members were more inclined to believe that marijuana should be available to all (X^2, .025) and fewer thought moderate use of LSD to be dangerous (X^2, .025). Far more religious students from this group (40%) than non-religious (19%) stated that the primary reason presenting their use of LSD was fear of mental health difficulties (X^2, .025). The general impression given by the responses of this younger group was that their drug involvement is quite limited and that their patterns of drug attitudes are extremely amorphous and not differentiated by most of the demographic variables.

Family income was a variable associated with a very specific drug involvement. Students from the high income group were found to be more willing to try the "mind-expanding" drugs (marijuana, AoV, .01, hashish,

.01, psilocybin, .05, LSD, .05) and the stimulants (benzedrine, .05 and dexedrine, .05). Far more of the high income students (70% compared to 36% of the low group) believed that marijuana should be available to all (X^2, .025). More of the high income believed that marijuana usage will increase (X^2, .025), whereas more of the low income group saw LSD use as increasing (X^2, .025).

This same variable was significantly related only to the number of school activities in which the students were involved in the case of the 8th graders (the high group students were involved in more activities (AoV, .05).

Looking at race as a variable among the 12th graders it can be seen that the white students knew far more about drugs (AoV, .01) and were more willing to try hashish (AoV, .05) and alcohol (AoV, .05). The white students were more inclined to believe that stimulants should be used only under medical control, whereas blacks were more likely to feel that nobody should use them (X^2, .005). More black students believed that a high percentage of their peers had experienced heroin (X^2, .005) and LSD (X^2, .025). And finally, more of the whites stated that they had gained their knowledge of drugs from friends and older users, whereas a much larger percentage of the blacks had gained theirs from films (X^2, .001). It was also found that the blacks indicated a greater readiness to assume a sick role than the whites (AoV, .01).

Race was the most significant demographic variable among the younger students, with whites knowing more about drugs (AoV, .05) and showing a greater willingness to try psilocybin (AoV, .05). However, the black students were far more willing to try heroin (AoV. .01) and codeine (AoV, .05). It is significant to note that 14.3% of the 8th grade black students were definitely willing to try heroin, as compared to only 4.3% of the black 12th graders and none of the white students in either group. More of the whites believed that tranquilizers should be used only under medical supervision, while more of the blacks thought they should be used by no one (X^2, .05). In looking at the motives behind marijuana use, more whites (40% vs. 7%) believed the primary motive to be curiosity, while more blacks (21% vs. 6%) believed it to be the need for assurance (X^2, .01). More blacks thought the effects of heroin to be pleasant, while more whites thought them to be deceiving or didn't know (X^2, .05). As with the older group, more blacks derived their drug knowledge from films and a number of them described their parents as their primary source of information (X^2, .001). The whites had learned more from friends and older users. The black students were found to be more willing to deal with psychological discomfort through the use of drugs (AoV, .01), while the white students to a greater extent tended to deny the effects drugs might have on them (AoV, .05).

A number of significant differences in relation to grade point average were found among the 12th grade students. Students with less than average grades were found to be more willing to try the hallucinogens (LSD, Aov, .01 and peyote, .05), the stimulants (dexedrine, .05 and methedrine, .05), and tobacco (.05). The A-B range students scored higher on the Drug Knowledge Scale (AoV, .01). The below average students were most inclined to view moderate use of sleeping pills as dangerous

(X^2, .025), while the average and above average students believed stimulants should be used only under medical control (X^2, .025). On the Drug Attitude Scale the below average students were found to have less fear of loss of control under the influence of drugs (AoV, .01). This was not a significant variable among the 8th graders.

A number of highly significant changes took place as a result of the drug education sequence that were observable among both grade levels. Students in both the discussion and lecture groups, with little difference between the groups, learned a good deal about drugs. Non-significance between the treatment group reflects the lack of differentiation between the two. Students in the discussion groups were simply not willing to discuss their views on drugs with an unknown authority figure, or in the case of the 8th graders, did not seem to have a sufficient enough base of drug knowledge for meaningful discussion. Consequently, the educator was very active in both groups, which reduced their differentiating qualities substantially. This is in contrast to the control groups, who showed a slight tendency to fare worse on the retest, probably as a result of their discontentment at having to retake the lengthy tests for what there did not seem to be an adequate reason. The 8th graders were found to have learned significantly more than the 12th, reflecting their lower level of drug knowledge to begin with (grade level - pre-post interactive effects F value 5.70 sig. .05). Both groups at both grade levels showed a significant decrease in scores on the insecurity factor of the Drug Attitude Scale (pre-post F value 53.59 sig. .001). On the same scale, curiosity scores dropped quite significantly (pre-post F value 38.94 sig. .001). There was a similar decrease in scores on the Law attitude Scale(pre-post F value 43.22 sig. .001) and on the marijuana legalization question (pre-post F value 46.26 sig. .001).

What this means is that, first of all, students who were involved in the education sequence learned a good deal about drugs. At the same time they became more curious about the effects of "mind-expanding" drugs and showed a greater tendency to deal with their insecurity and psychological discomfort through chemical means. The changes on the legal questions indicate a move away from the position that drug use should be dealt with quite harshly in a legal manner toward a position that drug use or abuse should be dealt with from a medical viewpoint or it should be a matter of free choice. There was a stronger feeling that drug laws should not be as harsh, and that marijuana should be legalized. However, along with the changes on the insecurity and curiosity factors, there was not a corresponding significant change in willingness to try any of the given drugs. There was only a very slight trend toward greater willingness to try marijuana and the hallucinogens. This seems to indicate that the general tendency toward drug use was increased, but this tendency did not focus on any specific drugs.

Even though with one exception there were no statistically significant changes on the attitude questions; a number of interesting and meaningful trends were detected that were quite drug specific. Looking at the 12th graders, following the education sequence there was a 17% increase in members of the lecture group who no longer saw moderate use of marijuana as being dangerous. Fewer in this group thought that no one should use marijuana, and there was a 13% increase in those who thought its use will

increase. At the same time 11% changed in the direction of thinking that the effects of marijuana are deceiving. In the discussion group, 19% changed in the direction of believing moderate use of marijuana not to be dangerous (X^2, sig. .05). An increase of 10% in this group thought it should be available under medical supervision, while 12% thought its use would not increase.* Approximately 10% more of each group were no longer sure whether moderate use of sleeping pills is dangerous. There was an increase in members of both groups who no longer thought moderate use of LSD to be dangerous (15% lecture, 7% discussion), and 15% from both groups changed in the direction of believing it should only be used under medical supervision. More of the first group saw its use decreasing (12%), while more of the second group saw no change (10%).* Approximately 10% more of the discussion group members thought tranquilizer and sitmulants should be freely available to all, and an equal change was found in the other group on the stimulant item. More of the lecture group (10%) saw tranquilizer use increasing and no change in future use of stimulants (8%). More (8%) of the discussion group saw a decrease in the use of both. Finally, following the education sequence 20% of each group changed in reason stated for restriction of drug use away from fear to physical health. More discussion group members later mentioned the laws as their primary deterrent, while in other groups more mentioned family reasons.

Among the 8th graders there were fewer discernable trends. A common tendency on many of the items was a switch from lack of opinion to any of a number of responses. Attitude changes thus occurred, but not in a consistent direction. It's interesting to note the sometimes opposite changes in the lecture group from those in the older group, despite the fact that the presentations were the same. In the lecture group the education sequence procuced changes in the direction of seeing marijuana as dangerous (12%) and its effects as unpleasant (10%).

More members of the discussion group saw marijuana use as remaining constant (27%)., but did not know about its effects (16%). Both groups changed from no opinion on the moderate use of sleeping pills and tranquilizers, more believing sleeping pills not to be dangerous (15% group 1 and 7% group 2). More members of the discussion group saw stimulant use as increasing (9%), no change in tranquilizer use (19%), and LSD usage remaining constant (16%). Increase numbers (27%) of the second group saw no change in future stimulant use and no change in LSD use (17%). Approximately 18% of both groups changed in the direction of seeing the primary motive for heroin use as curiosity, and increasing numbers of both groups did not know about its effects (12% and 19%). Increasing numbers of the lecture later saw their families as the primary restriction to drug use (12%) while 11% of the discussion group switched to mental health.

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*Almost 12% in this group changed to the opinion that marijuana use is prompted by the desire to escape.

*Both groups showed 12% increases in those believing the principle motive for LSD use to be escape.

DISCUSSION

The results indicate that the drug education sequence produced some relatively subtle changes in orientation toward the use of drugs and drug users. For one thing, students involved in this sequence became a good deal more liberal in their attitudes toward the drugs themselves, users of the illicit drugs, and laws regarding drug use, although there were no significant changes in their own desire to try the specified drugs. This can be seen in the lower scores on the law attitude and marijuana legalization items, and in a number of trends in the comparative data that fell short of statistical significance. On the post scores, more of the students were inclined to believe that the use of drugs should be a matter of free choice. More of the 12th graders came to believe that the moderate use of marijuana and LSD is not dangerous and that marijuana should be freely available to anyone desiring to use it. There was a greater inclination to attribute more positive motivation to drug users, and less of a tendency to believe that use of marijuana and LSD would lead to the use of narcotics. In general, the attitude that underwent change were those pertaining to the drugs themselves and those who use them, but not to personal use. This change probably reflected their increased level of sophistication concerning the effects of drugs and the motives of drug users, and a concurrent decrease in emotionality surrounding the subject. It seems to have been the case with at least some of these students that this was the first time they had been exposed to a rational presentation of both the positive and negative aspects of drug use, and the complexity of factors that determine drug use and legislative responses to such behavior. The presentations were relatively liberal in that as part of the factual presentation about the given drugs, the pleasurable aspects of each, particularly marijuana, was described in as objective a manner as possible, as were the detrimental effects. That some drugs have pleasurable aspects cannot be denied in a factual presentation, and to do so would be to deny the direct experience of many members of the audience and to create serious doubts as to the credibility and competence of the educator. However the risks involved in such presentations were pointed out by the other significant changes, which indicated that the students became more curious about the effects of "mind-expanding" drugs and more likely to see the use of drugs as a possibility in dealing with personal inadequacy or psychological discomfort. Whether these two trends would later lead to an increase in actual drug use can only be determined through longitudinal studies of the effects of similar cognitive input. The hope is that through experiences with drug education that future use of drugs will have a greater quality of rationality and foresight on the part of the participants. Again, there arises the inevitable theme of rational drug use, which increasingly seems to be the only realistic goal of drug education.

The relationships between the demographic variables and the attitude items points out the complexity of the determinants of drug use. In this case, involvement of individuals in a wide range of roles and activities was associated with differential patterns of attitudes about drugs. Thus, it can be seen, for instance, that males in this study were more positively oriented toward the use of a variety of drugs, particularly marijuana, the mild hallucinogens, and alcohol. At the same time, they were more

liberal in their views about the availability of marijuana and LSD, and about laws pertaining to drug use. Religious involvement was found to have just the opposite effect, in that religiously inclined subjects tended to hold more conservative views and students from higher income families had more liberal views about marijuana, the hallucinogens, and the stimulants.

These results indicate that an individual's attitudes about drug use are firmly enmeshed within the context of that person's place in society and in the specific roles and activities in which he is involved. The lack of change on the willingness items, despite the increased knowledge about drugs, is probably a function of this complexity of determinants of drug attitudes. That is, the willingness to try particular drugs evidently is a function of a complex of cognitive, emotional, and social factors, and will most likely not vary as a result of changes in any one of these components, as was here found to be the case with cognitive change. This is also most likely the reason why the first part of the data analysis found relatively low correlations between drug knowledge and willingness to try the given drugs. Any change in willingness to try drugs can probably only come about through simultaneous changes at many levels of human functioning. This implies that the growing number of drug educators who advocate the use of complex approaches that focus on broader concepts of drug use and human behavior most probably are moving in a direction that is consistent with the nature and complexity of drug use.

The students in this study generally were not positively oriented toward the use of most drugs, which is surprising in light of the fact that Gainesville is a university town with what the press and various citizen groups have described as a rather serious drug problem. As mentioned earlier, the most commonly accepted drugs were marijuana, alcohol, and tobacco. Acceptance of this triad was relatively discriminative and was not highly associated with willingness to try most of the other drugs. A very negative view of LSD was expressed on a number of items and in the discussion groups. A number of students described their own bad experiences with it and those of friends, enough to indicate that within the student culture there is a developing bias against its use that is based on knowledge of its effects. The lack of willingness to try most of the stimulants, depressants and pain-killers was quite evident, raising questions about the use and availability of these drugs at home. It might be productive for further research to focus on the relationship between total family and individual child drug use and attitudes.

A feeling expressed by some of these students was that they didn't think that a serious drug problem existed in their environment and they resented the over-reaction and intolerance exhibited by many adults and authorities with whom they came into contact. This attitude was largely responsible for the indifference of some, and even suspicion and hostility of others, that greeted the drug educator at the beginning of the sequence. It was definitely the case in this study that continued involvement and openess with the students was absolutely necessary for a reciprocated acceptance and involvement. As mentioned earlier, it was this initial distrust, particularly on the part of the

12th graders, that limited involvement in the early discussions, necessitating greater input from the drug educator than was anticipated, which limited the differentiation between the two approaches, lecture and discussion. However, the format in either case was still different, indicating that some aspects of the source of information may not be as important as was believed. Perceived credibility of the source may be most important, which is most likely a function of the degree of correspondence between the initial presentations and the experiences and knowledge of members of the class. It appears that a credible source, whether he be an authority figure or peer, will be accepted by the students and will produce changes in their attitudes regarding drug use.

Summary and Conclusions

Analysis of the data indicated that the most appealing drugs to these students were marijuana, alcohol, and tobacco. There was little inclination to try the hallucinogens, and only a slightly greater tendency to try the stimulants and depressants. Grade level, sex, race, family income, religious involvement were all found to be characteristics that differentiated between students on a number of items measuring attitudes about a variety of drugs. In general, attitudes of these students were found to be quite drug specific rather than generalized across all drugs.

Students who were involved in the drug education sequence showed substantial gains in knowledge about drugs. At the same time, they became more curious about the effects of "mind-expanding" drugs, and showed a greater tendency to deal with their insecurity and psychological discomfort through chemical means. There was movement away from the position that drug use should be dealt with quite harshly in a legal manner toward a position that drug use and abuse should be approached from a medical viewpoint or that the whole issue should be a matter of free choice. There developed a stronger feeling that drug laws should not be as harsh, and that marijuana should be legalized. However, there was not a corresponding significant change in willingness to try any of the given drugs, indicating that, although a more positive orientation toward drug use resulted, it was not focused on any specific drugs.

A conclusion that emerges from these results is that individuals involved in the drug education movement must recognize and deal with the probability that open and honest communication of known facts about drugs will increase curiosity and create a more favorable orientation toward drug use among the participants. Any of these individuals who proceed from the biased position that drug use, particularly of the illicit drugs, must be eliminated, and who choose drug education as the best means for accomplishing this end, are faced with a number of alternatives. Abandonment of drug education programs would mean that decisions about personal drug use would more likely be decided by influences from within the youth culture, based on the wisdom and perspectives of adolescents. Almost all indications are that implementation of drug education programs based on falsification of data and sensationalism would not be accepted by the students and would probably lead to reduced communication about drugs between students and program authorities. And, as the results of this study indicate about the third alternative, programs characterized by open communication of known facts about drugs will most probably increase curiosity and create a more favorable orientation toward drug use among the participants. The inescapable conclusion is that drug education is not an effective means of suppressing drug use. Consequently, individuals who wish this end must either seek other means or modify the goals of such programs in a direction that would be more consistent with the nature and extent of drug use.

It appears that the most tenable position on this issue is the one that maintains that our culture has a strongly positive drug orientation, and that its members will use drugs. Education can only provide the

means for making rational decisions about personal drug use based on knowledge about drugs and people, and the interactions fo the two.

The results of this study further indicate that the attitudes of these students were quite drug specific. For instance, although marijuana and hashish are both cannabis derivatives, the students were far less willing to try the latter. Consequently, drug educators must be aware of these oftentimes subtle discriminations when interacting with the participants. Also, it appears that these discriminations and patterns of both drug involvement and attitudes vary according to locale, such that educators must be aware of the specifics of drug interest and use in their own area. This can only be accomplished through communication of very sensitive information and views, which demands the establishment of a good deal of trust. The drug educator in this study found it extremely difficult to get the students to talk about such matters because of their understandable suspicion and distrust of a strange authority figure.

At the same time, drug educators must not get too involved in detail and facts about specific drugs. The results of this study indicate that a number of highly generalized factors, such as the tendency to deal with psychological discomfort through the use of drugs, are important determinants of drug use. This study also found that even though knowledge about specific drugs increased, there was no change in willingness to try any of the drugs. This may be an indication that drug use is determined primarily by factors other than knowledge of the specific drugs. The students themselves indicated they believe these factors to be more in the nature of curiosity, pleasure-seeking, group pressure, need to escape, and so on. All of these are factors that have bases in the individual that go far beyond the specific drugs that may be involved. For example, if an individual is using a specific drug, like a tranquilizer, to deal with his anxiety, then the use of the specific drug is incidental to the basic problem, which is the anxiety and perhaps the perceived lack of other alternatives for dealing with it. Consequently, drug education might be more effective if it were actually "people" education that dealt more with general principles behind, and alternatives to, the use of drugs, as well as the nature and results of the specific drugs.

And, finally, it seems important that drug education cover the use of all drugs, not just the "mind-expanding" drugs, as is so commonly the case. The participants in this study indicated they were most willing to try marijuana, alcohol, and tobabbo. Consequently, it is particularly important that any drug education sequence with a similar group concentrate on rational use of all of these drugs, as was the case here. This study was conducted as part of the regularly scheduled drug education sequence in the junior high school, a sequence that later included alcohol and tobacco. It was the feeling of those involved in the study that it would be of more benefit to all involved and more in keeping with the magnitude of drug involvement and misuse to make drug education a normal part of the curriculum, rather than an event calling for suspension of regular classes and an influx of community drug experts. Perhaps it would be best for a limited number of such experts simply to be participants in student discussion groups as part of the regular curriculum procedure.

APPENDIX

Table 1

Research Instruments and Number of Responses to Each Item in Pre-test

		Number of Responses	
		Male	Female
Sex	12th Grade	47	65
	8th Grade	62	73
Age	12th Mean	17.0	
	8th Mean	13.3	

	12th	8th
Total Family Income		
Less than $5,000	10	11
$5,000-$10,000	18	24
$10,000-$15,000	26	24
$15,000-$20,000	18	10
Over $20,000	22	8
Race		
Black	26	32
White	82	92
Other	4	8
Degree of Religious Involvement		
None	15	21
Attend Services Occasionally	48	45
Attend Services Regularly	42	46
Intensively Involved	6	21

Table 1--continued

	Number of Responses	
	12th	8th
Religious Preference		
Catholic	17	10
Protestant	67	89
Other	7	2
Number of School Activities		
0	36	38
1	20	34
2	17	28
3	13	17
Over 3	26	18
Grade Point Average		
0.0-1.0	1	2
1.1-2.0	14	28
2.1-3.0	43	57
3.1-4.0	40	32
Does your present knowledge of drugs and the drug problem come primarily from:		
Formal course work	19	17
Personal experiences with friends and acquaintances who are drug users	4	1
Own drug use		
News media	10	3
Other	32	38
No knowledge	10	19

Table 1--continued

	Number of Responses	
	12th	8th
Select the statement below which most closely represents your opinion:		
Drugs should be used for medical purposes only	51	78
Drugs are an aid to the enjoyment of life	2	5
Drugs are essential for the enjoyment of life	2	4
Drugs should be strictly a matter of free individual choice	56	41

Table 1--continued

Willingness to Try Drugs Scale and
Number of Responses on Each Item

Type of Drug	Definitely Unwilling		Somewhat Unwilling		Neutral		Somewhat Willing		Definitely Willing	
Marijuana	42*	87	6	14	9	12	29	9	24	9
Hashish	52	98	9	7	14	13	16	3	18	4
Hallucinogens										
Psilocybin	83	89	11	8	9	10	3	1	2	4
LSD	92	110	7	9	5	5	3	4	2	3
Peyote	85	90	13	8	4	9	3	3	2	5
Sedative-Hypnotics										
Seconal	75	87	14	5	11	13	4	3	3	1
Phenobarbital	78	85	13	7	8	13	4	2	4	1
Pain Killers										
Demoral	72	74	13	17	12	16	8	7	3	1
Heroin	96	109	7	9	4	1	1	2	1	4
Codein	80	95	12	8	8	7	5	6	2	3
Tranquilizer										
Miltown (Equanil)	76	82	11	12	13	12	4	3	4	4
Stimulants										
Benzedrine	76	88	15	10	9	9	5	1	4	4
Dexedrine	79	94	13	8	7	6	3	2	6	2
Methedrine	73	95	16	7	9	8	3	1	6	2
Other										
Alcohol	27	61	11	17	13	22	20	13	38	14
Tobacco	49	86	12	7	8	10	14	16	25	10

*Number of 12th grade responses on each item listed first, followed by 8th.

Table 1--continued

What is your opinion concerning the moderate use of the following pharmacological substances, (1) dangerous, (2) not dangerous, or (3) I don't know.

		(1)	(2)	(3)
a. Aspirin	12th	16	85	9
	8th	27	75	27
b. Sleeping Pills	12th	49	47	14
	8th	76	20	30
c. Tranquilizers	12th	42	47	21
	8th	60	27	37
d. Glue (or glue-like inhalents)	12th	94	3	13
	8th	95	16	15
e. Cannabis Derivatives (hashish, marijuana)	12th	41	42	27
	8th	70	32	23
f. LSD or LSD-Like Substances	12th	93	6	10
	8th	102	13	11

Table 1--continued

According to you, the following substances should be used:

(1) Freely by all, (2) by no one, (3) under medical control

			(1)	(2)	(3)
a.	Tranquilizers	12th	8	5	98
		8th	22	14	91
b.	Stimulants	12th	10	10	90
		8th	19	24	80
c.	Glue or Glue-Like Inhalents (vapor to sniff)	12th	10	86	13
		8th	22	75	27
d.	Cannabis Derivatives (hashish, derivatives)	12th	55	39	12
		8th	41	64	19
e.	LSD or LSD-Like Substances	12th	11	69	27
		8th	19	77	32

Table 1---continued

Which trend do you foresee in the use (other than medical) of the following substances:

(1) Increase, (2) decrease, (3) no change, (4) I don't know

		(1)	(2)	(3)	(4)
a. Tranquilizers	12th	34	21	50	18
	8th	42	12	40	15
b. Stimulants	12th	43	28	31	19
	8th	52	14	28	14
c. Blue or Glue-Like Inhalents (vapor to sniff)	12th	36	34	35	16
	8th	13	60	19	16
d. Cannabis Derivatives (hashish, marijuana)	12th	55	21	29	16
	8th	77	8	14	9
e. LSD or LSD-Like Substances	12th	49	28	28	17
	8th	36	31	22	19

Table 1--continued

Is the proportion of students in your environment who have already had an experience with drugs:

(1) More than 50%, (2) 39-49%, (3) 15-29%, (4) 5-14%, (5) 1-4%, (6) less than 1%, (7) null, (8) I don't know

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
a.	Heroin	12th	5	2	8	9	12	16	10	45
		8th	14	5	7	7	9	10	10	58
b.	Cannabis	12th	47	22	12	3	4	1	3	13
		8th	21	12	7	10	6	7	6	50
c.	LSD	12th	6	12	8	13	12	15	4	35
		8th	12	6	7	10	5	8	7	60

According to you, what is the principal reason, amongst those listed below, that motivates the users of the following substances?

(1) Curiosity, (2) better self-knowledge, (3) need of assurance, (4) challenge to the society, (5) escape, (6) group influence

			(1)	(2)	(3)	(4)	(5)	(6)
a.	Heroin	12th	12	0	3	5	50	34
		8th	24	9	10	16	27	32
b.	Cannabis	12th	53	5	1	6	5	36
		8th	35	6	13	12	16	32
c.	LSD	12th	20	6	4	10	34	29
		8th	26	8	8	10	30	32

Table 1--continued

From what you may have heard, the effects produced by the following substances are:

(1) Pleasant, (2) deceiving, (3) unpleasant, (4) I don't know

		(1)	(2)	(3)	(4)
a. Heroin	12th	17	17	43	31
	8th	15	21	50	32
b. Cannabis	12th	83	6	8	9
	8th	35	15	36	29
c. LSD	12th	21	34	30	21
	8th	15	21	50	30

Do you think that those who regularly use these substances (marijuana, LSD) are more susceptible to becoming users of narcotics (type morphine, heroin)?

(1) Yes, (2) no, (3) I don't know

	(1)	(2)	(3)
12th	66	17	25
8th	68	25	31

Table 1--continued

Do you think that your restriction to the use of these substances (marijuana, LSD) comes chiefly from: (give one answer only)

(1) Family environment, (2) legal penalties, (c) consequences on physical health, (4) consequences on mental health

	(1)	(2)	(3)	(4)
12th	19	42	20	20
8th	37	32	14	30

Select the statement below which most closely represents your opinion:

(1) Alcohol is not a drug, (2) the most common drug of abuse is alcohol, (3) alcohol is the safest drug, (4) alcohol is the most dangerous drug, (5) 1 and 3, (6) none of these

	(1)	(2)	(3)	(4)	(5)	(6)
12th	23	39	2	3	18	21
8th	23	24	10	8	22	27

What term best relates to the reasons behind drug use?

(1) Peer pressure, (2) to feel good, (3) inability to cope with daily problems, (4) search for personal identity, (5) escape, (6) heightened experience, (7) all of the above

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
12th	1	17	7	4	4	7	68
8th	3	9	18	8	14	3	58

The most trusted source of information to the drug user:

(1) Teacher, (2) friend, (3) police, (4) older drug user, (5) parents, (6) adult expert, (7) films, pamphlets, etc.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
12th	2	26	1	49	4	6	13
8th	3	26	9	38	6	9	21

Table 1--continued--DRUG ATTITUDE SCALE

. If there were a drug which would make me feel less anxious, I would take it.

. Sometimes I feel I have to take something to make me less self-conscious.

. Sometimes I feel I have to take something to make me relax.

. Sometimes I feel I have to take something to stimulate me.

. I wish that all my problems could be solved by taking a pill.

. I wish I could get some help to achieve "the real me."

7. I get very afraid if I don't know what is happening to me.

3. I am more concerned than most people about my bodily feelings.

9. I would be afraid of losing personal control under drugs.

0. Even though a drug might not be physically habit-forming, I would be afraid of becoming dependent on it psychologically.

1. I would be suspicious of anyone who urged me to take a drug without a prescription.

2. I would be worried if I had to take a drug whose effects I knew little about.

.3. I would report to the Health Service if I had a temperature of about 100 degrees.

14. I would report to the Health Service if I had a temperature of about 101 degrees.

15. I would report to the Health Service if I had been feeling poorly for a few days.

16. People will not do anything they would not normally do when under the influence of drugs.

17. I would not do anything I would not normally do under the influence of drugs.

18. I would avoid taking drugs, when I'm sick, for as long as I could.

19. In general, I tend to avoid taking medicine and drugs.

20. I would be curious to know what effect a "mind-expanding" drug would have on me.

21. If given a choice between them, in a supervised experiment, I would prefer a drug that stimulates rather than tranquilizes.

.2. Most people are curious to know what effect a "mind-expanding" drug would have on them.

Table 1—continued

Marijuana Legalization:

(1) Strongly agree, (2) moderately agree, (3) slightly agree, (4) slightly disagree, (5) moderately disagree, (6) strongly disagree

	(1)	(2)	(3)	(4)	(5)	(6)
12th	25	9	12	17	10	21
8th	25	8	9	14	14	24

Table 2

Correlations Between Continuous Variables

Willingness to try: 12th Grade

	Marijuana	Hashish	Psilocybin	LSD	Peyote	Seconal	Phenobarbital	Demoral	Heroin
Marijuana		.86 .001	.44 .001	.39 .001	.39 .001	.30 .001	.31 .001	.24 .001	
Hashish			.52 .001	.45 .001	.48 .001	.37 .001	.37 .001	.28 .001	.14 .047
Psilocybin				.72 .001	.81 .001	.49 .001	.57 .001	.43 .001	.31 .001
LSD					.66 .001	.45 .001	.50 .001	.41 .001	.40 .001
Peyote						.62 .001	.65 .001	.50 .001	.37 .001
Seconal							.90 .001	.66 .001	.48 .001
Phenobarbital								.66 .001	.47 .001
Demoral									.47 .001
Heroin									
Codeine									
Miltown									
Benzedrine									
Dexedrine									
Methedrine									
Alcohol									
Tobacco									

Table 2--continued

Willingness to Try: 12th Grade

	Codeine	Miltown	Benzedrine	Dexedrine	Methedrine	Alcohol	Tobacco	Drug Knowledge
Marijuana	.27 .001	.30 .001	.41 .001	.44 .001	.43 .001	.66 .001	.71 .001	.36 .001
Hashish	.28 .001	.32 .001	.47 .001	.50 .001	.50 .001	.59 .001	.69 .001	.36 .001
Psilocybin	.48 .001	.39 .001	.65 .001	.74 .001	.66 .001	.24 .001	.38 .001	.20 .005
LSD	.42 .001	.35 .001	.58 .001	.64 .001	.59 .001	.19 .010	.34 .001	.14 .050
Peyote	.52 .001	.48 .001	.65 .001	.69 .001	.68 .001	.18 .012	.37 .001	.20 .006
Seconal	.54 .001	.64 .001	.68 .001	.63 .001	.66 .001	.18 .011	.26 .001	.15 .001
Phenobarbital	.58 .001	.61 .001	.69 .001	.66 .001	.67 .001	.19 .010	.24 .001	
Demoral	.69 .001	.63 .001	.62 .001	.60 .001	.62 .001		.14 .053	
Heroin	.58 .001	.42 .001	.51 .001	.46 .001	.46 .001			
Codeine		.61 .001	.63 .001	.63 .001	.63 .001		.15 .040	
Miltown			.69 .001	.62 .001	.65 .001		.23 .001	.21 .001
Benzedrine				.95 .001	.92 .001	.22 .003	.28 .001	
Dexedrine					.90 .001	.23 .001	.30 .001	.15 .041
Methedrine						.22 .001	.29 .001	.17 .022
Alcohol							.57 .001	.30 .001
Tobacco								.33 .002

Table 2--continued

Willingness to Try:

12th Grade

	Insecurity	Curiosity	Law Attitudes	Legalize Marijuana	Fear of Loss of Control
Marijuana	-.31 .001	-.27 .001	-.44 .001	-.36 .001	
Hashish	-.30 .001	-.29 .001	-.41 .001	-.30 .001	.22 .003
Psilocybin	-.29 .001		-.33 .009	-.20 .001	.26 .001
LSD	-.27		-.25 .001		.24 .001
Peyote	-.29 .001		-.31 .001		.30 .001
Seconal	-.17 .021		-.16 .043		.20 .007
Phenobarbital	-.20 .007		-.18 .023		.21 .005
Demoral	-.18 .018				
Heroin	-.30 .001				.18 .018
Codeine	-.30 .001		-.16 .037		.15 .052
Miltown			-.17 .025		
Benzedrine	-.27 .001		-.19 .013		.27 .001
Dexedrine	-.27 .001		.21 .001		.26 .001
Methedrine	-.26 .001		-.20 .010		.21 .004
Alcohol		-.16 .035	-.21 .007	-.18 .021	
Tobacco	-.25 .001	-.21 .005	-.34 .001	-.35 .001	

Table 2

Correlations Between Continuous Variables

Willingness to try: 8th Grade

	Marijuana	Hashish	Psilocybin	LSD	Peyote	Seconal	Phenobarbital	Demoral	Heroin
Marijuana	.76 .001	.76 .001	.54 .001	.56 .001	.56 .001	.55 .001	.58 .001	.50 .001	.29 .001
Hashish			.71 .001	.71 .001	.75 .001	.67 .001	.72 .001	.62 .001	.38 .001
Psilocybin				.82 .001	.84 .001	.82 .001	.81 .001	.59 .001	.65 .001
LSD					.84 .001	.78 .001	.76 .001	.57 .001	.64 .001
Peyote						.87 .001	.87 .001	.60 .001	.58 .001
Seconal							.94 .001	.61 .001	.58 .001
Phenobarbital								.66 .001	.52 .001
Demoral									.46 .001
Heroin									
Codeine									
Miltown									
Benzedrine									
Dexedrine									
Methedrine									
Alcohol									
Tobacco									

Table 2--continued

Willingness to Try: 8th Grade

	Codeine	Miltown	Benzedrine	Dexedrine	Methedrine	Alcohol	Tobacco	Drug Knowledge
Marijuana	.48 .001	.54 .001	.52 .001	.52 .001	.47 .001	.49 .001	.53 .001	.19 .004
Hashish	.67 .001	.66 .001	.62 .001	.62 .001	.62 .001	.50 .001	.53 .001	.14 .045
Psilocybin	.70 .001	.68 .001	.73 .001	.75 .001	.78 .001	.34 .001	.44 .001	
LSD	.69 .001	.63 .001	.65 .001	.73 .001	.70 .001	.40 .001	.47 .001	
Peyote	.67 .001	.70 .001	.67 .001	.74 .001	.69 .001	.39 .001	.48 .001	
Seconal	.68 .001	.71 .001	.71 .001	.75 .001	.69 .001	.39 .001	.49 .001	
Phenobarbital	.68 .001	.72 .001	.73 .001	.75 .001	.75 .001	.38 .001	.46 .001	
Demoral	.69 .001	.62 .001	.53 .001	.54 .001	.54 .001	.41 .001	.40 .001	
Heroin	.70 .001	.62 .001	.58 .001	.69 .001	.68 .001	.20 .001		
Codeine		.75 .001	.65 .001	.66 .001	.68 .001	.39 .001	.46 .001	
Miltown			.80 .001	.77 .001	.72 .001		.37 .001	
Benzedrine				.91 .001	.83 .001	.22 .001	.41 .001	
Dexedrine					.89 .001	.24 .001	.42 .001	
Methedrine						.25 .001	.49 .001	
Alcohol							.63 .001	
Tobacco								

Table 2--continued

Willingness to Try: 8th Grade

	Insecurity	Curiosity	Law Attitudes	Legalize Marijuana	Fear of Loss of Control
Marijuana	-.36 .001		-.20 .006	-.30 .001	-.39 .001
Hashish	-.35 .001		-.23 .001	-.29 .001	-.32 .001
Psilocybin	-.22 .003			-.24 .001	
LSD	-.24 .001			-.24 .001	
Peyote	-.27 .001			-.19 .017	
Seconal	-.20 .007				
Phenobarbital	-.25 .001			-.17 .045	
Demoral	-.28 .001				
Heroin	-.16 .021				
Codeine	-.25 .001				
Miltown	-.27 .001				
Benzedrine	-.27 .001			-.21 .010	-.20 .015
Dexedrine	-.24 .001	-.21 .010		-.19 .024	
Methedrine	-.26 .001			-.23 .005	
Alcohol	-.19 .007				-.17 .026
Tobacco	-.25 .001				-.20 .012

Table 3

Significant Analyses of Variance

SEX

	12th Grade (d.f. 1,105)		8th Grade (d.f. 1,119)	
	F Value	P Value	F Value	P Value
School activities	4.92	.05		
Willingness to try marijuana	9.66	.01		
Willingness to try hashish	13.17	.01		
Willingness to try psilocybin	9.34	.01	5.60	.05
Willingness to try LSD				
Willingness to try peyote	9.76	.01	4.29	.05
Willingness to try phenobarbital	4.59	.05		
Willingness to try benzedrine	6.04	.05	6.04	.05
Willingness to try dexedrine	4.61	.05		
Willingness to try alcohol	7.66	.01		
Drug knowledge	10.81	.01		
Any use marijuana	16.88	.01		
Any use LSD	7.04	.01		
Trend marijuana	6.33	.05		
Percent marijuana users	11.64	.01		
Percent LSD users	3.77	.05		
Effects heroin	7.82	.01		
Insecurity	4.21	.05		
Fear of loss of control	16.68	.01		
Sick role			7.99	.01
Denial of effects	4.22	.05	4.59	.05
Law attitude	6.67	.05		

Table 3--continued

RELIGIOUS INVOLVEMENT

	12th Grade (d.f. 2,103)		8th Grade (d.f. 2,117)	
	F Value	P Value	F Value	P Value
School activities	3.63	.05		
Willingness to try marijuana	3.98	.05	3.54	.05
Willingenss to try hashish	4.74	.05		
Willingness to try psilocybin	3.91	.05		
Willingness to try peyote	4.64	.05		
Willingness to try alcohol	5.47	.01		
Willingness to try tobacco	3.61	.05		
Drug knowledge	4.39	.05	3.18	.05
Any use stimulants	9.94	.01		
Any use marijuana	6.14	.01	6.32	.01
Any use LSD	5.02	.01		
Percent marijuana users	7.84	.01		
Effects marijuana			4.84	.01
Effects LSD	4.78	.05		
Susceptible marcotics	5.40	.01		
Sick role	9.66	.01		
Denial effects	4.47			

Table 3--continued

FAMILY INCOME

	12th Grade (d.f. 2,089)		8th Grade (d.f. 2,068)	
	F Value	P Value	F Value	P Value
School activities			3.70	.05
Willingness to try marijuana	5.36	.01		
Willingness to try hashish	5.59	.01		
Willingness to try psilocybin	4.32	.05		
Willingness to try LSD	3.47	.05		
Willingness to try benzedrine	3.67	.05		
Willingness to try dexedrine	4.68	.05		

Table 3--continued

RACE

	12th Grade (d.f. 1,101)		8th Grade (d.f. 1,111)	
	F Value	P Value	F Value	P Value
Grade point average	6.49	.05		
Willingness to try hashish	4.32			
Willingness to try heroin			11.42	.01
Willingness to try codeine			4.15	.05
Willingness to try alcohol	5.97	.05		
Drug knowledge	23.68	.01	5.00	.05
Any use marijuana	6.08	.05		
Trend marijuana			4.02	.05
Effects marijuana	4.79	.05	6.57	.05
Restrictions of use	4.68	.05		
Insecurity			8.13	.01
Sick role	12.77	.01		
Denial of effects			4.81	.05

Table 3--continued

GRADE POINT AVERAGE

	12th Grade (d.f. 2,104)		8th Grade (d.f. 2,118)	
	F Value	P Value	F Value	P Value
Willingness to try LSD	5.39	.01		
Willingness to try peyote	3.36	.05		
Willingness to try dexedrine	3.22	.05		
Willingness to try methedrine	3.66	.05		
Willingness to try tobacco	3.68	.05		
Drug knowledge	8.71	.01		
Any use stimulants	7.42	.01		
Percent heroin users	4.62	.05		
Effects marijuana	3.80	.05		
Effects LSD	3.36	.05		
Reasons for drug use			4.31	.05
Sources information			4.18	.05
Fear of loss of control	7.27	.01		
Legalize marijuana	3.73	.05		

Table 4

Significant Chi Square Values

12th Grade

Does your present knowledge of drugs and the drug problem come primarily from:

Race	18.639	6df	.01	N=105
		Black	White	
Formal Courses		8.0	20.0	
Own Use		32.0	25.0	
Other		20.0	33.0	
Personal Experience with Drug Users		0	5.0	
News Media		8.0	8.8	
No Knowledge		16.0	7.5	

Select the statement below which most closely represents your opinion:

Family Income	16.102	6df	.025	N=93
		Less Than 10,000	10-15,000	Over 15,000
Medical Purposes		64.3	40.9	23.8
Aid to Enjoyment		6.7	2.1	0
Free Choice		35.7	54.5	66.7
Essential for Enjoyment		0	4.5	0

Table 4--continued

12th Grade

Religious Involvement	18.42326	6df	.01	N-110
		None	Occasionally	Regularly
Medical Purposes		6.7 %	43.8 %	59.6 %
Aid to Enjoyment		6.7	2.1	0
Free Choice		86.7	54.2	36.2
Essential for Enjoyment		0.7	0	4.3

Willingness to Try Marijuana

Religious Involvement	16.035	8df	.05	N=109
		None	Occasionally	Regularly
Definitely Unwilling		26.7 %	34.0%	44.7 %
Somewhat Unwilling		0	2.1	10.6
Neutral		6.7	8.5	8.5
Somewhat Willing		13.3	34.0	23.4
Definitely Willing		53.3	21.3	12.8

Table 4--continued

12th Grade

Sex	12.726	4df	.025	N=110
		Male	Female	
Definitely Unwilling		23.9 %	48.4 %	
Somewhat Unwilling		4.3	6.3	
Neutral		8.7	7.8	
Somewhat Willing		26.1	26.6	
Definitely Willing		37.0	10.9	
Family Income	25.799	8df	.025	N=92
		Under 10,000	10-15,000	Over 15,000
Definitely Unwilling		46.4 %	44.2 %	19.0%
Somewhat Unwilling		14.3	2.3	0
Neutral		17.9	2.3	4.8
Somewhat Willing		14.3	18.6	47.6
Definitely Willing		7.1	32.6	28.6

Table 4--continued

12th Grade

Willingness to Try Hashish

Sex	13.47980	4df	.01	N=109
		Male	Female	
Definitely Unwilling		31.8 %	58.5 %	
Somewhat Unwilling		6.8	9.2	
Neutral		11.4	13.8	
Somewhat Willing		20.5	10.8	
Definitely Willing		29.5	7.7	
Religious Involvement	17.12115	8df	.05	N=108
		None	Occasionally	Regularly
Definitely Unwilling		33.3 %	45.7 %	53.2 %
Somewhat Unwilling		0	6.5	12.8
Neutral		6.7	15.2	12.8
Somewhat Willing		13.3	13.0	17.0
Definitely Willing		46.7	19.6	4.3

Table 4--continued

12th Grade

Willingness to Try Psilocybin

Sex	10.102	4df	.05	N=108
		Male	Female	
Definitely Unwilling		65.9 %	84.4 %	
Somewhat Unwilling		9.1	10.9	
Neutral		15.9	3.1	
Somewhat Willing		4.5	1.6	
Definitely Willing		4.5	0	

Willingness to Try LSD

Religious Involvement	16.058	8df	.05	N=107
		None	Occasionally	Regularly
Definitely Unwilling		66.7 %	84.8 %	89.4 %
Somewhat Unwilling		13.3	6.5	4.3
Neutral		6.7	8.7	0
Somewhat Willing		13.3	0	2.1
Definitely Willing		0	0	4.3

Table 4--continued

12th Grade

Willingness to Try Peyote

Sex	10.191	4df	.05	N=107
		Male	Female	
Definitely Unwilling		65.1 %	89.1%	
Somewhat Unwilling		18.6	7.8	
Neutral		7.0	1.6	
Somewhat Willing		4.7	1.6	
Definitely Willing		4.7	0.0	
Religious Involvement	16.296	8df	.05	N=106
		None	Occasionally	Regularly
Definitely Unwilling		53.3 %	82.2%	84.8%
Somewhat Unwilling		26.7	8.9	10.9
Neutral		0	6.7	2.2
Somewhat Willing		13.3	2.2	0
Definitely Willing		6.7	0	2.2

Table 4--continued

12th Grade

Willingness to Try Phenobarbital

Religious Involvement	17.256	8df	.05	N=106
		None	Occasionally	Regularly
Definitely Unwilling		66.7 %	71.1 %	76.1 %
		13.3	15.6	8.7
		0	11.1	6.5
		0	2.2	6.5
		20.0	0	2.2

Willingness to Try Codeine

Religious Involvement	16.640	8df	.05	N=106
		None	Occasionally	Regularly
Definitely Unwilling		73.3 %	80.0%	69.6%
		6.7	8.9	15.2
		6.7	8.9	6.5
		0	2.2	8.7
Definitely Willing		13.3	0	0

Table 4--continued

12th Grade

Moderate Use of Marijuana

Sex	9.249	2df	.01	N=110
		Male	Female	
Dangerous		21.7%	48.4%	
Not Dangerous		52.2	28.1	
Don't Know		26.1	23.4	

Religious Involvement	11.863	4df	.025	N=109
		None	Occasionally	Regularly
Dangerous		20.0%	31.9%	46.8%
Not Dangerous		73.3	40.0	25.5
Don't Know		6.7	27.7	27.7

Table 4--continued

12th Grade

Any Use Tranquilizers

Religious Involvement	19.071	4df	.001	N=110
		None	Occasionally	Regularly
Freely by All		33.3 %	2.1%	4.2 %
By No One		6.7	6.4	2.1
Under Medical Control		60.0	91.5	93.8

Any Use Stimulants

Race	12.834	2df	.005	N=106
		Black	White	
Freely by All		0 %	11.0 %	
By No One		25.0	3.7	
Medical Control		75.0	85.4	

Table 4--continued

12th Grade

Religious Involvement	20.540	4df	.001	N=109
		None	Occasionally	Regularly
Freely by All		40.0 %	2.1 %	6.4 %
By No One		6.7	8.5	10.6
Under Medical Control		53.3	89.4	83.0
Grade Point Average	12.725	4df	.025	N=110
		1.00	2.00	3.00
Freely by All		18.5 %	4.7 %	7.5 %
By No One		22.2	4.7	5.0
Under Medical Control		59.3	90.7	87.5

Table 4--continued

12th Grade

Any Use Marijuana

Sex	13.392	2df	.005	N=106
		Male	Female	
Freely by All		72.7%	37.1%	
By No One		22.7	46.8	
Under Medical Control		4.5	16.1	
Family Income	12.128	4df	.025	N=90
		0-10,000	10-15,000	Over 15,000
Freely by All		35.7%	50.0%	70.0%
By No One		60.7	33.3	15.0
Under Medical Control		3.6	16.7	15.0

Table 4--continued

12th Grade

Religious Involvement	11.967	4df	.025	N=105
		None	Occasionally	Regularly
Freely by All		86.7%	55.8%	38.3%
By No One		13.3	30.2	48.9
Under Medical Control		0	14.0	12.8

Any Use LSD

Sex	8.881	2df	.025	N=107
		Male	Female	
Freely by All		20.9%	3.1%	
By No One		55.8	70.3	
Under Medical Control		23.3	26.6	

Table 4--continued

12th Grade

Religious Involvement	21.739	4df	.001	N=106
		None	Occasionally	Regularly
Freely by All		42.9%	6.7%	4.3%
By No One		35.7	75.6	61.7
Under Medical Control		21.4	17.8	34.0

Trend Marijuana

Sex	10.59294	3df	.025	N=108
		Male	Female	
Increase		86.7%	60.3%	
Decrease		4.4	9.5	
No Change		2.2	20.6	
Don't Know		6.7	9.5	

Table 4--continued

12th Grade

Family Income	15.18730	6df	.025	N=92
		Low	Mid	High
Increase		64.3 %	81.4 %	81.0 %
Decrease		21.4	0	0
No Change		7.1	11.6	14.3
Don't Know		7.1	7.0	4.8

Trend LSD

Family Income	15.57421	6df	.025	N=92
		Low	Mid	High
Increase		25.0%	48.8%	14.3%
Decrease		46.4	11.6	42.9
No Change		17.9	23.3	28.6
Don't Know		10.7	16.3	14.3

Table 4--continued

12th Grade

Percent of Experience with Heroin

Race	21.25838	7df	.005	N=103
		Black	White	
Over 50%		18.2%	0%	
30-49%		4.5	1.2	
15-29%		13.6	6.2	
5-14%		4.5	9.9	
1-4%		0	13.6	
Less Than 1%		9.1	17.3	
Null		91.	9.9	
Don't Know		40.9	42.0	

Grade Point Average	26.23730	14df	.025	N=107
		1.00	2.00	3.00
Over 50%		8.0%	7.0%	0%
30-49%		0	4.7	0
15-29%		4	14.0	2.6
5-14%		20.0	7.0	2.6
1-4%		0	18.6	10.3
Less Than 1%		8.0	14.0	20.5
Null		12.0	7.0	10.3
Don't Know		48.0	27.9	53.8

Table 4--continued

12th Grade

Percent of Experience with Marijuana

Religious Involvement	25.45	14df	.001	N=104
		None	Occasionally	Regularly
Over 50%		80.0%	54.8%	25.5%
30-49%		6.7	26.2	21.3
15-29%		6.7	11.9	12.8
5-14%		0	0	6.4
1-4%		0	2.4	6.4
Less Than 1%		0	0	2.1
Null		0	0	4.3
Don't Know		6.7	4.8	21.3
Sex	20.96280	7df	.005	N=105
		Male	Female	
Over 50%		57.1%	36.5%	
30-49%		19.0	22.2	
15-29%		19.0	6.3	
5-14%		0	4.8	
1-4%		0	6.3	
Less Than 1%		0	1.6	
Null		4.8	1.6	
Don't Know		0	20.6	

Table 4--continued

12th Grade

Percent of Experience with LSD

Race	17.19983	7df	.025	N=101
		Black	White	
Over 50%		20.0%	2.5%	
30-49%		15.0	11.1	
15-29%		0	8.6	
5-14%		0	14.8	
1-4%		0	14.8	
Less Than 1%		15.0	13.6	
Null		5.0	3.7	
Don't Know		45.0	30.9	

Motives LSD

School Activities	21.94769	10df	.025	N=103
		0	1	2
Curiosity		27.3%	18.2%	13.5%
Self Knowledge		3.0	6.1	8.1
Assurance		3.0	6.1	2.7
Challenge to Society		0	12.1	16.2
Escape		18.2	30.3	48.6
Group Influence		48.5	27.3	10.8

Table 4--continued

12th Grade

Effect of LSD				
Grade Point Average	15.77802	6df	.025	N=106
		1.00	2.00	3.00
Pleasant		24.0%	19.0%	17.9%
Deceiving		16.0	21.4	53.8
Unpleasant		40.0	31.0	17.9
Don't Know		20.0	28.6	10.3

Susceptible to Narcotics				
Religious Involvement	10.73852	4df	.05	N=107
		None	Occasionally	Regularly
Yes		33.3%	55.6%	74.5%
No		20.0	22.2	8.5
Don't Know		46.7	22.2	17.0

Table 4--continued

12th Grade

Opinion of Alcohol

Grade Point Average	20.41942	10df	.05	N=106
		1.00	2.00	3.00
Not Drug		11.1 %	34.9 %	13.9 %
Most Commonly Abused Drug		22.2	30.2	55.6
Safest Drug		3.7	2.3	0
Most Dangerous Drug		7.4	0	2.8
1 and 3		22.2	18.6	11.1
None		33.3	14.0	16.7

Reasons for Drug Use

Sex	16.70778	6df	.025	N=108
		Male	Female	
Peer Pressure		2.2%	0%	
Feel Good		28.9	6.3	
Inability to Cope		8.9	4.8	
Identity		0	6.3	
Escape		2.2	4.8	
Experience		2.2	9.5	
All		55.6	68.3	

Table 4--continued

12th Grade

Source of Information

Race	24.43346	6df	.001	N=97
		Black	White	
Teacher		4.3 %	0%	
Friend		8.7	29.7	
Police		4.3	0	
Older User		39.1	52.7	
Parents		13.0	1.4	
Expert		0	8.1	
Films		30.4	8.1	

Table 4--continued

8th Grade

Source of Drug Knowledge

Sex	13.90845	6df	.05	N=76
		Male	Female	
Formal Course		20.0 %	8.6 %	
Personal Experience		0	1.4	
Own Use		23.6	21.4	
News Media		5.5	0	
Other		21.8	37.1	
No Knowledge		20.0	11.4	

Race	16.13365	6df	.025	N=74
		Black	White	
Formal Course		0%	17.8%	
Personal Experience		0	1.1	
Own Use		40.3	15.6	
News Media		0	2.2	
Other		19.2	33.3	
No Knowledge		11.5	16.7	

Table 4--continued

8th Grade

Willingness to Try Marijuana

Religious Involvement 21.07471	8df	.01	N=130
	None	Occasionally	Regularly
Definitely Unwilling	47.6 %	66.7%	73.4 %
Somewhat Unwilling	14.3	13.3	7.8
Neutral	14.3	4.4	10.9
Somewhat Willing	0	13.1	3.1
Definitely Willing	23.8	2.2	4.7

Moderate Use of Sleeping Pills

Grade Point Average 14.45162	4df	.0	N=126
	1.00	2.00	3.00
Dangerous	69.0 %	69.8 %	32.3 %
Not Dangerous	9.5	15.1	25.8
Don't Know	21.4	15.1	41.9

Table 4--continued

8th Grade

Willingness to Try Hashish

Family Income	18.3416	8df	.05	N=74
		Low	Mid	High
Definitely Unwilling		75 %	70.8 %	66.7 %
Somewhat Unwilling		12.5	0	11.1
Neutral		12.5	20.8	5.6
Somewhat Willing		0	8.3	0
Definitely Willing		0	0	16.7

Willingness to Try Psilocybin

Race	10.57930	4df	.05	N=104
		Black	White	
Definitely Unwilling		64.0 %	83.5 %	
Somewhat Unwilling		12.0	6.3	
Neutral		8.0	8.9	
Somewhat Willing		4.0	0	
Definitely Willing		12.0	1.3	

Table 4--continued

8th Grade

Willingness to Try Heroin

Race	13.83817	3df	.005	N=115
		Black	White	
Definitely Unwilling		75.0%	92.0%	
Somewhat Unwilling		7.1	6.9	
Somewhat Willing		3.6	1.1	
Definitely Willing		14.3	0	

Willingness to Try Codeine

Race	10.69904	4df	.05	N=109
		Black	White	
Definitely Unwilling		66.7 %	85.4 %	
Somewhat Unwilling		7.4	4.9	
Neutral		7.4	4.9	
Somewhat Willing		7.4	4.9	
Definitely Willing		11.1	0	

Table 4--continued

8th Grade

Willingness to Try Miltown

Race	10.07652	4df	.05	N=105
		Black	White	
Definitely Unwilling		61.5%	75.9%	
Somewhat Unwilling		19.2	7.6	
Neutral		3.8	12.7	
Somewhat Willing		3.8	2.5	
Definitely Willing		11.5	1.3	

Any Use Tranquilizers

Race	7.22835	2df	.05	N=118
		Black	White	
Freely by All		23.3%	14.8%	
By No One		23.3	8.0	
Under Medical Control		53.3	77.3	

Table 4--continued

8th Grade

Moderate Use of LSD

Religious Involvement	12.49030	4df	.025	N=125
		None	Occasionally	Regularly
Dangerous		80.0%	0%	2%
Not Dangerous		0	20.0	6.5
Don't Know		20.0	4.7	6.5

Any Use Marijuana

Religious Involvement	12.74704	4df	.025	N=123
		None	Occasionally	Regularly
Freely by All		61.1%	27.9%	27.4%
By No One		38.9	46.5	59.7
Under Medical Control		0	25.6	12.9

Table 4--continued

8th Grade

Effect of Marijuana

Religious Involvement	14.21255	6df	.05	N=114
		None	Occasionally	Regularly
Pleasant		52.9%	17.5%	33.3%
Deceiving		5.9	17.5	12.3
Unpleasant		23.5	25.0	38.6
Don't Know		17.6	40.0	15.8

Trend LSD

Sex	11.25365	3df	.025	N=122
		Male	Female	
Increase		43.4	37.7	
Decrease		34.0	14.5	
No Change		17.0	27.5	
Don't Know		5.7	20.3	

Table 4--continued

8th Grade

Motives Marijuana

Race	15.62943	5df	.01	N=106
		Black	White	
Curiosity		7.1%	39.7%	
Self Knowledge		10.7	2.6	
Need for Assurance		21.4	6.4	
Challenge to Society		14.3	9.0	
Escape		17.9	11.5	
Group Influence		28.6	30.8	

Effect of Heroin

Sex	12.58977	3df	.01	N=118
		Male	Female	
Pleasant		23.1%	4.5%	
Deceiving		23.1	13.6	
Unpleasant		32.7	50.0	
Don't Know		21.2	31.8	

Table 4--continued

8th Grade

Race	8.64477	3df	.05	N=109
		Black	White	
Pleasant		24.1 %	7.5 %	
Deceiving		10.3	21.3	
Unpleasant		51.7	42.5	
Don't Know		13.8	28.8	

Restriction of Use

Religious Involvement	14.96010	6df	.025	N=111
		None	Occasionally	Regularly
Family		37.5 %	34.2%	28.1%
Law		37.5	31.6	24.6
Physical Health		6.3	23.7	7.0
Mental Health		18.8	10.5	40.4

Table 4--continued

8th Grade

Marijuana Legalization

School Activities	27.08934	15df	.05	N=94	
		0	1	2	3 or more
Strongly Agree		21.7 %	18.5 %	55.0 %	16.7 %
Moderately Agree		4.3	7.4	0	20.8
Slightly Agree		17.4	14.8	5.0	0
Slightly Disagree		26.1	7.4	15.0	12.5
Moderately Disatree		4.3	22.2	10.0	20.8
Strongly Disagree		26.1	29.6	15.0	29.2

Source of Information

Race	24.01523	6df	.001	N=104
		Black	White	
Teacher		7.7 %	1.3 %	
Friend		7.7	26.9	
Police		7.7	9.0	
Older User		26.9	37.2	
Parents		19.2	0	
Expert		3.8	10.3	
Films		26.9	15.4	

Table 4--continued

8th Grade

Marijuana Legalization

Family Income	19.82721	10df	.05	N=56
		Low	Mid	High
Strongly Agree		28.0 %	39.8 %	23.1 %
Moderately Agree		0	11.1	30.8
Slightly Agree		20.0	16.7	0
Slightly Disagree		4.0	11.1	15.4
Moderately Disagree		24.0	0	0
Strongly Disagree		24.0	22.2	30.8

BIBLIOGRAPHY

Blum, Richard and Associates. Students and Drugs, Vol. 2, Jossey-Bass, Inc.:San Francisco, 1969.

Brehm, Mary L. and Beck, Kurt W. Self-image and attitudes toward drugs, Journal of Personality, 1968, 36 (2), pp. 299-314.

D'Elia, Joseph A. and Bedworth, Albert E. (Exec. Eds.). Drug Education: A position paper, Journal of Drug Education, Vol. 1 (2), June, 1971, pp. 123-136.

Goddard, James L. What you should know about the drug problem. School Management, 10 January, 1966, pp. 96-99.

Halleck, Seymour, M.D. The great drug education hoax. Capsules, Vol. 3, No. 1, April, 1971.

Knowlis, H. H. Drugs on the College Campus. A publication of Drug Education Project of the National Association of Student Personnel Administrators, December, 1967.